

LINEAR TECHNOLOGY LT8640IUDC#PBF DC-DC Switching Step Down Regulator, Adjustable, 3.4V-42V<sub>in</sub>, 970mV-41.9V<sub>out</sub>, 5A<sub>out</sub>, QFN-18

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	20-WFQFN, 18 Leads,
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT8640IUDC#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The LT8640S/LT8643S synchronous step-down regulator features second generation Silent Switcher architecture designed to minimize EMI/EMC emissions while delivering high efficiency at high switching frequencies. This includes the integration of bypass capacitors to optimize all the fast current loops inside and make it easy to achieve advertised EMI performance by reducing layout sensitivity. This performance makes the LT8640S/LT8643S ideal for noise- sensitive applications and environments.

The fast, clean, low overshoot switching edges enable high efficiency operation even at high switching frequencies, leading to a small overall solution size. Peak current mode control with a 30ns minimum on-time allows high step-down ratios even at high switching frequencies. The LT8643S has external compensation via the VC pin to enable current sharing and fast transient response at high switching frequencies. A CLKOUT pin enables synchronizing other regulators to the LT8640S/LT8643S.

Burst Mode operation enables ultralow standby current consumption, forced continuous mode can control frequency harmonics across the entire output load range, or spread spectrum operation can further reduce EMI/EMC emissions. Soft-start and tracking functionality is accessed via the TR/SS pin, and an accurate input voltage UVLO threshold can be set using the EN/UV pin.

## Features

Silent Switcher<sup>®2</sup> Architecture

Ultralow EMI/EMC Emissions on Any PCB

Eliminates PCB Layout Sensitivity

Internal Bypass Capacitors Reduce Radiated EMI

Optional Spread Spectrum Modulation

High Efficiency at High Frequency

Up to 96% Efficiency at 1MHz, 12VIN to 5VOUT

Up to 95% Efficiency at 2MHz, 12VIN to 5VOUT

Wide Input Voltage Range: 3.4V to 42V

6A Maximum Continuous, 7A Peak Output

Ultralow Quiescent Current Burst Mode<sup>®</sup> Operation

2.5 $\mu$ A IQ Regulating 12VIN to 3.3VOUT (LT8640S)

Output Ripple < 10mVP-P

External Compensation: Fast Transient Response and Current Sharing (LT8643S)

Fast Minimum Switch On-Time: 30ns

Low Dropout Under All Conditions: 100mV at 1A

Forced Continuous Mode

Adjustable and Synchronizable: 200kHz to 3MHz

Output Soft-Start and Tracking

Small 24-Lead 4mm  $\times$  4mm LQFN Package

## Application

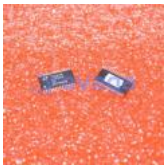
Automotive and Industrial Supplies

General Purpose Step-Down



2022 10 26

## Related Products



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TSSOP28



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Analog Devices, Inc  
TO-3



### [LTC4417IUF](#)

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QFN-24



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